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Remarks

The Examiner's Answer refers to Applicant's Appeal Brief filed on July 25, 2003. Applicant notes for the record that a first Appeal Brief was filed on July 25, 2003, and a second Substitute Appeal Brief was filed on August 4, 2003. The Substitute Appeal Brief included the addition of a second Appendix (a letter to Applicant from Creative Group Marketing LLC) that was inadvertently omitted from the original Appeal Brief filed on July 25, 2003. Applicants note that a Notice of Appeal was filed on March 4, 2003, and a Request for Extension of Time was filed on July 25, 2003, to extend the response period to August 4, 2003. Thus, it was believed that the Substitute Appeal Brief was timely filed.

In the Examiner's Answer, the Examiner upheld the final rejection of claims 1-6, 9-19, 21-25, 27 and 28 as being unpatentable under 35 U.S.C. 103(a) over Herzog et al. (U.S. Patent No. 4,669,903) in view of Wang (U.S. Patent No. 5,334,976) and Christopher et al. (U.S. Patent No. 4,075,679).

Applicant respectfully asserts that the arguments presented in the Examiner's Answer do not support a rejection of the claims under 35 U.S.C. § 103(a).

1. Herzog et al. (U.S. 4,669,903) is not a suitable § 103(a) reference

Appellant's invention provides a keyboard that allows young children and adolescents or adults having small hands to learn to type and otherwise input data into a computer while minimizing the risk of injury to their hands. As described and claimed, Appellant's invention provides a fixed key input apparatus comprising keys with a size and relative spacing that ranges from 60 to 86% of the ANSI/NFS standard (Specification at page 5, lines 3-20; claims 1 and 23).

Appellant continues to assert that the primary reference cited by the Examiner, Herzog et al. (U.S. 4,669,903), does not anywhere teach or suggest a keyboard input apparatus having small keys and/or a reduced relative spacing between the keys. Instead, and as described in Appellant's Appeal Brief, Herzog et al. is concerned with *increasing* the spacing between keys. The keyboard of Herzog et al. is divided into a left sector and a right sector, with the columns of keys in the left and right sector structured in a diagonal descending away from the midline, to allow the hands to be placed on the keyboard such

that the hands are aligned outwardly with respect to the midline of the keyboard (Herzog et al., at col. 4, lines 11-16).

The Examiner acknowledges that “Hertzog does not teach clearly the vertical and horizontal spacings between the keys,” but states that “Hertzog et al. teaches the simplicity of the keyboard as shown in Appellant’s Figure 1 and the Alpha-Numeric core keyboard which includes QWERTY and DVORAK key arrangements to ‘facilitates teaching and learning how to operate a keyboard’”. Examiner’s Report at page 4, citing Herzog.

Herzog et al. does describe a QWERTY keyboard (Figure 1) and addresses problems of left hand misalignment that can result due to the layout of a conventional keyboard (Herzog et al., at col. 2, lines 41-59). The phrase cited by the Examiner is taken from a description noting that the objects of Herzog are to “provide an improved keyboard on which the keys in the Alpha-Numeric Core of the keyboard are operated with proper bio-mechanical alignment . . . that facilitates placement of the hands on the keyboard in proper position; that facilitates proper placement of the keyboard in relation to the mid-line of the body; and that facilitates teaching and learning how to use the keyboard.” Herzog et al. 3:15-25. Thus, Herzog et al. implicitly acknowledges the importance of ergonomic placement of the hands on a keyboard. Still, Herzog addresses a different problem – that the keys of standard keyboards are not optimally aligned for the correct positioning of the hand relative to the elbows – than the problem addressed by Applicant. The fact that Herzog describes a QWERTY keyboard does not teach or suggest any aspect of Applicant’s invention, but merely reflects that this type of keyboard is used in the art of typewriters, computers, and other types of keyboards. Thus, Herzog is applying the principle of positioning keys on a keyboard such that when typing, the hands will be aligned with the elbow. Herzog is not at all concerned with developing a keyboard for small hands, and teaches a completely different approach for ergonomic placement of the hands on a keyboard than the keyboard described and claimed by Applicant.

Finally, Applicant continues to maintain that Herzog teaches away from Applicant’s invention. Instead of teaching the use of keys that are closer together, Herzog recites a keyboard with a space in the middle of the keyboard, actually spreading

keys on the left side from the keys on the right. For at least these reasons, Appellant respectfully asserts that reliance on Herzog et al. is in error.

2. Wang (U.S. Patent No. 5,334,976) does not teach finger actuable keys proportioned for small hands

The second reference cited by the Examiner, U.S. Patent No. 5,334,976 to Wang, does not remedy the deficiencies of Herzog et al. The Examiner asserted that “[w]hile Herzog et al. does not teach the actual size of the keys, Wang teaches the actual size of the keys.” Examiner’s Answer at pages 4-5.

The Examiner further stated:

For example, Figs. 1 and 4f of Wang show the actual width of the alphabet key 26(Q) or 27 (W) which is 10.64 mm that is in the range of Appellant’s key width of 7.2 mm-13 mm, and the depth of the key 26 (Q) or 27 (W) which is 8.26 mm that is in the range of Appellant’s key depth of 7.2 –15 mm. Hence the horizontal spacing between the keys, centerline to centerline, is 13.14 mm ($1/2$ width of key 26 + $1/2$ width of key 27 + the distance between the keys *which is appears to be $1/4$ the width of the key* -> $5.32\text{ mm} + 5.32\text{ mm} + 2.5\text{ mm} = 13.14\text{ mm}$) which is well in the middle range of 10.8 mm to 18 mm as recited in claim 1. The same calculation for the vertical spacing between the keys 26 and 27 has a result of 10.8 mm which is well in the middle range of 10.8 to 18 mm as recited in claim 1.

Examiner’s Answer at page 5 (emphasis added).

As indicated by the emphasized portion of the text, the Examiner is basing his determination of the horizontal and vertical spacing between the keys as including a distance eyeballed from the figures “which [is] appears to be $1/4$ the width of the key.” This calculation is in direct contrast, however, to the description in Wang. Thus, Wang teaches that “the vertical distance between the four horizontal lines which pass through the centers of alphabet keys 26, 28 and 30, Ctrl key 16, Alt key 18, and Space key 20 are all 9.53 mm (0.375 in). The respective horizontal distances between vertical lines passing through alphabet keys 26, 28, and 30 are 3.20 mm (0.126 in) and 6.35 mm (0.25 in).” (Wang at col. 6, lines 41-47). These distances, a vertical key spacing of 9.53 mm, and a horizontal key spacing of 3.2 and 6.35 mm are well below the ranges, 10.8 mm and 13.14 mm, respectively, calculated by the Examiner. These horizontal and vertical distances are also well below the ranges described and claimed by Applicant.

In contrast to Applicant's invention, Wang specifically teaches a keyboard having two types of keys: (1) keys that are smaller in size and spacing than standard sized keys and that are activated by a stylus; and (2) keys that are of standard size and spacing and that are activated by the user's fingers (Wang at col. 2, lines 24-38). The Examiner acknowledges that Wang teaches a keyboard having a combination of finger actuable and stylus-actuable keys, but states that "[w]hile the keyboard of Wang is used with a stylus for comfortably activating the keyboard, one [of] ordinary skill in the art would recognize that the keyboard of Wang can be operated by an user's fingers since the alphabet key 108 (Wang, Fig. 4f) has a dimension of 10.64 mm (0.42 in) x 8.32 mm (.33 in)." Examiner's Answer at page 6.

Applicant respectfully asserts that although the smaller alphabet keys may have a size within the range described by Appellant, the spacing between these keys is not within the range described by Appellant as suitable for activation by finger. The smaller keys described by Wang are proportioned to be activated by a stylus, wherein the radius of the stylus tip is much smaller than a finger tip radius. Wang at col. 4, lines 42-51. Because there is only one stylus being used to activate these keys (as opposed to multiple fingers), the distance between the keys may be, and is, much smaller than the distance between the finger-activated keys of Appellant's invention.

For finger-actuable keys, Wang et al. describes a spacing that is also outside of the ranges described by Appellant. Thus, in discussing the *minimum* spacing for finger-actuated keys, Wang specifically teaches that "[t]he vertical center-to-center dimension between the finger-actuable Shift key 14 and the Enter key 22 is at least greater than a value between the range of 18 mm (0.71 in) and 21 mm (0.83 in)." Wang at col. 4, lines 57-65, emphasis added. A vertical center-to-center distance of at least greater than 18 and 21 mm is outside of the range described and claimed by Appellant (a vertical spacing of 10.8 up to 18 mm) (emphasis added).

A person with small hands would have difficulty utilizing all of the keys on the Wang keyboard. The stylus actuable keys have a spacing range well below the range described and claimed by Appellant; the size and spacing for these keys corresponds to activation by a stylus, not small fingers. Additionally, the conventional sized keys of Wang are too large and spaced too far apart for use by a smaller hand. Appellant

respectfully asserts that Wang, *as a whole*, teaches away from the input apparatus as described and claimed in Appellant's present application and thus, should not be cited as a reference under 35 U.S.C. 103(a).

3. Christopher et al. (U.S. Patent No. 4,075,679) does not remedy the deficiencies of Herzog and Wang

Appellant continues to maintain that Christopher et al. offers nothing additional to Herzog et al. and Wang. Christopher et al. recites only a small keyboard input including a group of algebraic, special character keys, and numeric data keys for entering data into a calculator. There is no teaching in Christopher of a keyboard designed to facilitate teaching of typing or how to operate a keyboard. Instead, Christopher et al. is concerned with providing a programmable calculator that allows a user to enter lines of alphanumeric statements into the program. The keyboard is not designed for smaller hands, but for adult users wanting to enter short lines of alphanumeric programming instructions to perform complex algebraic calculations. Thus, Appellant respectfully asserts that the contribution of this reference is negligible.

4. The Examiner provides no basis for finding the prior art provides motivation to combine the cited references in such a manner as to find Appellant's invention to be obvious.

In rebutting Applicant's assertion that there is no motivation to combine the cited references, the Examiner stated that "[o]bviously, one of ordinary skill in the art would recognize that the reduced size alphabet keys of Wang which has a dimension of 10.64 mm (.42 in) x 8.26 in (.33 in) that can be operated by an user having small hands and would have found the reduced size keys as taught by Wang in Herzog et al. to have been obvious." Examiner's Answer at page 8.

Although the prior art in general may be used to show obviousness, the Examiner provides absolutely no basis for the above statement. It is not obvious how combining a reference teaching increasing the spacing between keys with a second reference teaching small keys designed for actuation by a stylus teaches or suggests Applicant's invention. First, Herzog et al. and Wang address problems that are completely unrelated, both to

each other, and to Appellant's invention. Also, both references teach away from Appellant's invention. It is improper to combine references where the references teach away from their combination. MPEP § 2145; see also *In re Grasselli*, 218 USPQ 769, 779, 713 F.2d 731, 743 (Fed. Cir. 1983) The teaching or suggestion to make the claimed combination must be found in the prior art, not in Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

For at least reasons, Appellant respectfully asserts that the Examiner has been influenced by the Appellant's specification to engage in impermissible hindsight to combine the references.

5. Secondary considerations show that Appellant's invention is not obvious.

In Appellant's Appeal Brief secondary considerations were presented that supported Appellant's assertion that the claimed invention is not obvious. These secondary considerations were not alluded to in the Examiner's Answer.

As noted in Appellant's Appeal Brief, U.S. Patent No. 5,452,960 to Kuhlenschmidt describes a children's computer keyboard having color-coded keys that are *enlarged* in size to promote recognition of the keys by children. Thus, Kuhlenschmidt shows the long-felt need that existed at the time of Applicant's invention for a children's keyboard, but provides a solution very different than the keyboard described and claimed by Applicant.

Also, the usefulness and commercial need for a keyboard designed for use by children has been recognized by those in the industry. Appellant attaches herewith as Appendix I, a copy of a letter dated June 2, 2003, from a marketing firm in the industry (Creative Group Marketing LLC) to the Appellant acknowledging the potential market for the small keyboard described in Appellant's related patent, U.S. Patent 5,531,229, filed January 26, 1995, which is also for a keyboard for children and adults having small hands. Although referred to in the body of the Brief, this letter was inadvertently omitted from Appellant's Appeal Brief filed on July 25, 2003, but was included in Appellant's Substitute Appeal Brief, filed on August 4, 2003. This letter was received after the Appellant filed a Notice of Appeal on March 4, 2003, and thus, under 37 C.F.R. § 1.195,

Appellant respectfully requests consideration of this document, as evidence of recognition by those in the industry of the long-felt need for Appellant's invention.

Thus, Appellant maintains that even if the Board finds that the Examiner has made a *prima facie* case of obviousness, secondary considerations teach that Appellant's invention was not obvious at the time of invention, and thus is not unpatentable under 35 U.S.C. § 103(a).

Conclusion

For the reasons set forth herein, and in prior responses, it is submitted that the rejection of claims 1-6, 9-19, 21-25, 27 and 28 under 35 U.S.C. § 103 is improper and should not be sustained. Therefore, a reversal of the Final Rejection of the Examiner is respectfully requested.

This reply brief is being submitted in triplicate.

Respectfully submitted,

Date: 01/05/2004

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Appendix I: Letter to Appellant From Creative Group Marketing LLC (page 1 of 3)

Creative Group Marketing LLC

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June 2, 2003

Dennis W. Nusser
512 N. Victoria Terrace
Fort Lauderdale, Florida 33301

COPY

Re: Little Fingers Keyboard US Patent # 5,531,529

Dear Mr. Nusser,

Pursuant to our conversation, we are responding to you a bit more quickly than normal due to the fact that we are just finishing up meetings for this years Toy Fair. Additionally we are in the midst of preparing for our other shows, as well as new and subsequent demonstrations. As an aside, Toy Fair was just terrific this year and I wish we had been able to show your product there as I believe it would have gotten quite a good response (Toy Fair encompasses a huge variety of companies several of which deal with children's products and computer accessories, as well as direct marketing items).

What is positive about this year's events thus far, and what is encouraging overall, are that new concepts, products and all sorts of items are being reviewed and considered more seriously than in the past. Ever since September 11th, our marketplace has changed dramatically, and more home based items and family oriented products are very much in demand. Which is why we are interested in your submission.

With regard to the item submitted and after examining several patents and copyrights in the appropriate fields we found nothing which we believe directly coincides with the specifics of your product. Nor did we find any other products on the market which we believe to be similar. Moreover, we did our own review, and the consensus is that we feel the product and idea is quite unique and different. However, please be advised that we did not conduct a full patentability search. This was only a cursory and rough examination search for our own evaluation purposes. I realize that you have a patent already allowed but we do like to check the more recent allowances to be sure there is no infringement.

We are extremely interested in your product and believe it to have some potential with respect to possible licensing. In fact, I think it is quite good, with a broad appeal and applicable to a hot market. Furthermore, I like the fact that it's design is different and is offering something new and innovative. As such, we would like to work with you in pursuing a license and/or sale agreement. I might add that this is a particularly good time in that we have several trade shows and meetings coming up now through the end of spring and summer including the Licensing Show, Premium show, Direct Marketing,

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Computer Shows and other trade shows in the US and Europe. Of course, as mentioned previously, there is Toy Fair, which next year is in October and January, and one of our prime licensing venues. We additionally personally show and demonstrate products all year, and also place products on the major television shopping networks.

In the event you choose to allow us to proceed, we will require the exclusive rights to sell/license your product, and we will need to know with whom and/or to whom you have shown the item. We will require a retainer of \$3500.00 to cover services for a sixth month period. Or \$5900.00 for a one year period. Obviously, we prefer, and **strongly recommend**, a year's time, as licensing and selling a product can be a slow process.

The fee paid to us will be refundable to you out of our share of any potential royalties or advances, and upon the execution of a sale and/or license agreement. Moreover, we will work on a 25% commission with regard to all royalties, advances and/or sales of your rights or product. Additionally, we will incur all legal costs and all other costs, with the exclusion of any further patent filings, which may be necessary for licensing purposes. As a point of information most licensees (the company) will pay for any patent, copyright or trademark services required as part of an advance payment. If you are more comfortable you may want to consider doing your patent or other legal work through an attorney of your choice.

I do, however, want to make one thing very clear and understood. Our business is speculative in nature, and while we enjoy an excellent reputation, and have achieved a great number of licenses for our clients, we cannot, and will not, make any promises or guarantees of success. We may not succeed, and any monies paid will not be refunded.

The one issue that does concern us is the fact that this item has been licensed previously, and has been known. However, it should not preclude a new license being obtained. But, I did want to make this known to you in that sometimes companies are reluctant to issue products which have been on the market before. Although it has been done, and in some cases quite successfully.

Having said all of the above, and in the hopes that I haven't completely frightened you off, we would like to move forward. Companies are very hungry now, and always looking for new and innovative ideas. Particularly since the economy has been flat. In fact, we have had a number of companies coming to us soliciting products, especially direct marketing outfits with whom your product would be a natural fit. In short, this is a great time to license and sell, and while I can't assure you millions of dollars, a successful license could generate a very substantial income for many years to come.

You have a decision to make, and only you can make it. You may have further questions and concerns. In that event please feel free to call, write or E-mail (Garyahlert@AOL.com) us to discuss the above matters further. Should you wish to proceed please sign the brief Acknowledgement/Agreement below, and forward to us an originally signed copy of this letter, along with a payment made out to Creative Group

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Marketing. Please include any prototypes, additional ideas or modifications and other data or information you may have regarding the product.

A more formalized Representation Agreement which further outlines the terms and conditions of our relationship is available should you prefer to use it.

Sincerely yours,



Gary Ahlert

I accept the terms as outlined in this letter and authorize Creative Group Marketing to act as the exclusive agent for my product, "Little Fingers Computer Keyboard US Patent # 5,531,529". It is further understood and agreed that Creative Group Marketing will not accept any deals, agreements, sales, contracts, proposals or any other business arrangements without my prior express written approval. The six month or one year period of service by Creative Group Marketing will commence upon the signing date of this letter, and upon the appropriate full payment received from the inventor. If for any reason payment to Creative Group Marketing is not paid in full, then Creative Group Marketing is in no way bound to the inventor, and the terms and conditions of this letter become void.

Agreed To:

Six Months _____

One Year _____

Dennis W. Nusser

Date _____